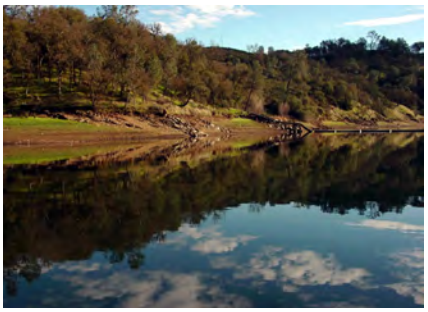
5 Utilities and Public Services

Availability and provision of adequate public utilities and services is an essential element of the San Pablo Avenue Specific Plan. This chapter describes the infrastructure needed to efficiently integrate new development with the services already provided by the City of San Pablo. It describes necessary improvements to public utilities and services, and establishes policies to help implement these improvements. Topics addressed include water, wastewater, stormwater, electricity and natural gas, and waste collection, as well as services for police and fire protection.

5.1 UTILITIES

The quality and availability of essential public utilities like water and waste management have a significant effect on the quality of life and sustainability of a community. This section outlines the infrastructure and utility needs for the Planning Area, including water, wastewater, electricity and natural gas and solid waste collection. Except for storm drain infrastructure, all utilities are administered by independent agencies. As such, Plan policies focus on cooperative planning efforts with these agencies, with the goal of ensuring that public utilities have the capacity to meet growth demands under the Specific Plan.



The Mokelumne River is EBMUD's primary water source.

Water

Water supply to the Planning Area is provided by the East Bay Municipal Utility District (EBMUD), which derives its water source from the Mokelumne River in the Sierra Nevada. This water is transmitted via aqueduct to storage and treatment facilities throughout EBMUD's service area, and is then distributed to customers. EBMUD operates five terminal reservoirs within East Bay: Briones, Chabot, Lafayette, Upper San Leandro, and San Pablo.[1] The San Pablo Reservoir is located in a valley north of Orinda, south of El Sobrante and Richmond, and east of the Berkeley Hills.

The total capacity of the EBMUD water supply system is constrained by the inherent dependence on seasonal rainfall and collected snowpack in the Sierra

1 EBMUD Urban Water Management Plan 2005.

Nevada watershed. On an average annual basis, approximately 90 percent of the water used by EBMUD comes from this source. The secondary source of water is the runoff from local watersheds at EBMUD's terminal reservoirs in the East Bay. According to EBMUD's 2009 Annual Report, the total average water production was 181 million gallons per day (mgd). San Pablo's estimated share of the total, calculated using proportionate share of the total population, is only 4.2 mgd or about 2.3 percent of the total.

Water Quality

EBMUD water supply quality consistently surpasses the standards set by the California Department of Health Services and the U.S. Environmental Protection Agency. This is because its primary water source is the Mokelumne River which flows from the remote Sierra Nevada region and requires only minimal treatment to meet health standards.

Projected Demand

The demand for water by East Bay communities is expected to increase over the next 20 years. According to EBMUD's 2005 Urban Water Management Plan, EBMUD required approximately 258 mgd of water to supply all its service areas in 2010. After taking into account conservation and other water recycling programs that each city is expected to adopt on its own, EBMUD still required 225 mgd of water to meet demand (see Table 5-1). By 2030, this demand is expected to increase by three percent to 232 mgd.

TABLE 5–1 PROJECTED WATER DEMAND AND SUPPLY IN EBMUD SERVICE AREA[1]

	2010	2020	2030
POPULATION			
EBMUD Service Area Population	1,380,000	1,475,000	1,598,000
San Pablo Population	32,200	33,580	34,950
Specific Plan Area Population	*4,000*	*5,090*	*6,170*
San Pablo population as a percent of EBMUD Service Area	2.3%	2.3%	2.2%
Specific Plan Area population as a percent of EBMUD Service Area	0.3%	0.4%	0.4%
DEMAND			
Total EBMUD Water Demand (mgd)	258	277	281
Adjustment for Conservation (mgd)	-21	-35	-35
Adjustment for Recycled Water (mgd)	-12	-14	-14
EBMUD Planning Demand	225	228	232
San Pablo's Planning Demand[2] (mgd)	5.3	5.3	5.4
Specific Plan Area's Planning Demand[2] (mgd)	*0.7*	*0.8*	*0.9*

1 EBMUD service areas include both incorporated and unincorporated areas in Alameda and Contra Costa counties.

2 San Pablo-specific water demand data were not available from EBMUD. Therefore, San Pablo existing and future water demand was estimated to be proportionate to the city's share of total service area population. E.g. In 2010, San Pablo's population is 2.3 percent of the service area total, so water demand is also estimated to be 2.3 percent of the total demand. Water demand for the Specific Plan Area was estimated similarly.

Source: East Bay Municipal Utilities District, Urban Water Management Plan 2005; Dyett & Bhatia, 2010.

EBMUD has no problem meeting water demand in a normal, non-drought year. However, in a one-year drought, EBMUD expects a demand-to-supply shortfall of five percent. The expected shortfall becomes greater the longer the drought lasts. As a consequence, the water supply is insufficient to meet customer needs even if aggressive water conservation and recycled water programs are put in place in a multi-year drought scenario.

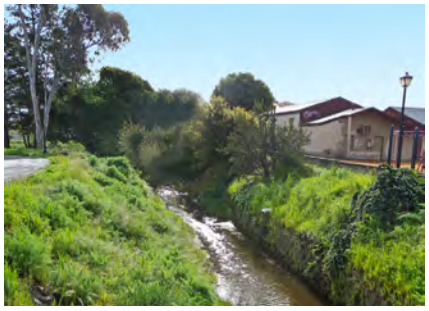
To improve water supply reliability in future droughts, EBMUD is adopting a multi-pronged approach to reduce water demand, increase water storage capacity, and find alternative sources of water supply. Some ongoing programs include the Seawater Desalination Research and Groundwater Banking Program.

Water Conservation

Water conservation and recycling measures are critical elements of EBMUD's water management plan. The agency takes a rigorous approach to water conservation, and expects to conserve and recycle about 49 mgd of water per day by 2030; equivalent to a 17 percent reduction of the daily demand. EBMUD promotes water conservation through education and outreach as well as offering water conservation programs that help residential and business customers save money and increase efficiency. While the City of San Pablo does not offer financial incentives as EBMUD does, it promotes water conservation through other means, including city policies in the proposed General Plan requiring new and remodeled homes to install high-efficiency toilets, and promoting the use of drought-resistant plants in city parks and gardens. The City also regularly publishes water conservation and recycling information in its newsletters to promote the use of water recycling systems and remind residents of EBMUD rebate and grant programs.

Storm Drainage

In San Pablo, storm water runoff is discharged through a combination of natural and man-made structures including creeks and drains. Falling rain in the Planning Area is generally directed to storm drains located along San Pablo Avenue, Broadway Avenue, and El Portal Drive, as well as San Pablo and Wildcat creeks. Of these drainage features, the creeks are most prone to flooding because of their shallow bed and high water table. The City cannot control the creek flow or capacity because portions of the creeks are located on private property. To prevent flooding, the City encourages homeowners along the creeks to help keep them clear of obstructions and to purchase flood insurance as a precaution.



San Pablo Creek runs through the middle of the City, part of which abuts single-family homes, where flooding is an issue.

The City of San Pablo participates in the Contra Costa Clean Water Program, which implements the National Pollution Discharge Elimination System (NPDES) countywide. The NPDES's purpose is to efficiently utilize available assessment funding to reduce pollution of the storm water and effectively maintain public storm drain facilities through inspection and enforcement activities and outreach to owners of industrial uses. Under the NPDES permit issued by the Regional Water Quality Control Board, San Francisco Bay Region, the City requires new development to treat storm water runoff using methods such as infiltration prior to discharge to the city storm drain system and creeks.

Wastewater

Wastewater treatment and disposal services in the Planning Area are provided by the West County Wastewater District (WCWD). The WCWD has a service area of 16.9 square miles which includes the City of San Pablo. The wastewater treatment plant located in North Richmond has a capacity of 12.5 mgd. The sewer lines in the city are generally made from vitrified clay pipe and some ductile iron. Most of the collection system infrastructure is more than 30 years old, with some of the oldest pipelines progressively being replaced or rehabilitated. The WCWD has an industrial pre-treatment program and monitors all industrial discharges. The treated effluent from the plant is pumped to a dechlorination facility at Point Richmond where it is combined with the City of Richmond's Municipal Sewer District effluent. The combined effluent is discharged in a deep water outfall into San Francisco Bay at Point Richmond. Currently, approximately 3.5 mgd of the WCWD effluent is recycled by EBMUD for reuse at the Chevron Refinery and 0.7 mgd is recycled for irrigation at the Richmond Country Club Golf Course.

As shown in Table 5-2, the average influent flow between September 2009 and August 2010 was about 9.4 mgd, but some months approached plant capacity and one month exceeded capacity. According to WCWD's District Engineer, there are no current or anticipated problems with treatment quality or standards, and infrastructure is generally sufficient to meet existing demands. However, because the infrastructure is designed based on current zoning classifications (which allow lower densities than what is anticipated for 2030), larger pipes will be required in the future. The WCWD is constantly updating its facilities and has been upsizing pipelines for peak storm events throughout the city as recommended in its 2001 Capacity Analysis Study and by 2006 flow monitoring efforts. All pipelines deficient for peak design storms will be upsized by 2012. In addition, the WCWD will likely conduct its first Wastewater Master Plan in 2011 and 2012, which will identify many six- and eight-inch diameter pipes that will need to be replaced with 10-inch diameter pipes.

TABLE 5–2 WASTEWATER FLOWS IN WEST COUNTY WASTEWATER DISTRICT

	INFLUENT FLOW	
MONTH	**AVERAGE (MGD)**	**TOTAL (MILLION GALLONS)**
September 2009	7.0	224.4
October 2009	8.0	260.0
November 2009	8.0	248.0
December 2009	9.0	273.0
January 2010	13.0	403.0
February 2010	11.9	333.3
March 2010	11.0	342.0
April 2010	10.6	318.4
May 2010	9.1	282.0
June 2010	8.5	254.3
July 2010	8.1	250.8
August 2010	8.1	251.0
AVERAGE	**9.4**	**286.7**

mgd= million gallons per day

Source: West County Wastewater District, 2010.

Electricity and Natural Gas

Pacific Gas & Electric currently provides gas and electric services to San Pablo homes and businesses. The utility company obtains its energy supplies from power plants and natural gas fields in northern California and delivers electricity through high voltage transmission lines. Electrical power is delivered to homes via various distribution feeders located throughout the city.

The availability of electricity and gas services is not expected to become an issue during the Specific Plan planning horizon since all homes are located within urban infill areas close to existing development.

Solid Waste Collection and Diversion

Solid waste disposal for the City of San Pablo is managed by the West Contra Costa Integrated Waste Management Authority (West County WMA). The West County WMA, which had a service population of 203,624 in September 2010, is the regional waste management authority and is mandated by State law to implement provisions of the Integrated Waste Management Act of 1989 for West Contra Costa County.

Solid waste collection and recycling services is provided by Richmond Sanitary Services, an affiliate of Republic Services, Inc. The company owns and operates a 21-acre site in Richmond including the West Contra Costa County

Sanitary Landfill, the Golden Bear Transfer Station, a household hazardous waste facility, and an integrated resource-recovery facility. Prior to 2007, the majority of the city's solid waste was taken to the West Contra Costa County Sanitary Landfill in Richmond. The facility was capped for final closure in 2009 but material sorting and recovery operations as well as recycling activities continue to be carried out on-site. Currently, 90 percent of West County's waste is brought to the Keller Canyon Landfill at Pittsburg; the other 10 percent is brought to a transfer station in Richmond before being redirected by trailer to Potrero Hills Landfill in Solano County. The Keller Canyon facility has a maximum capacity of 75 million cubic yards and has about 20 years of additional capacity.[2] The Potrero Hills facility has a maximum capacity of 21 million cubic yards and has an additional eight to ten years of permitted capacity.[3] Permit applications to expand the Potrero Hills facility are pending. If approved, the landfill's capacity would be quadrupled.

While landfill capacity is not an issue, the service agreements between the West County WMA and Republic Services for solid waste disposal, recycling processing, and composting are due to expire on December 31, 2013. In August 2010, the Authority began strategic planning sessions to determine its plans after 2013.

The West County WMA currently estimates that it has capacity to accommodate growth over the next 20 to 25 years. A review or study of capacity is required only when the agency estimates that capacity is sufficient for 15 years. For this reason, the agency does not foresee any problems related to meeting the solid waste disposal, diversion, or hazardous waste needs of the population projected by the San Pablo Avenue Specific Plan.

Recycling and Hazardous Wastes

Recycling and material sorting are carried out at the Richmond facility prior to sale and shipment to manufacturers. Richmond Sanitary Services currently offers a comingled program and alternates between collecting recyclable waste (blue cart) and green waste (green cart) every week from San Pablo homes. Meanwhile, non-recyclable garbage (brown cart) is collected every week. The household hazardous waste facility at 101 Pittsburg Avenue in Richmond, accepts a variety of hazardous and universal waste products such as paints, solvents, fuels, cleaners, and pesticides. There is no door-to-door hazardous waste collection service in San Pablo but residents and non-profits may drop off their household hazardous waste at no cost. A mobile collection service is available for disabled residents and senior citizens by appointment.

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2 The expected closure date for Keller Canyon Landfill is 31 December, 2030, according to CalRecycle.

3 The expected closure date for Potrero Hills Landfill is 1 January, 2011, according to CalRecycle. However, Potrero Hills has additional capacity beyond this date, the future expansion of this facility is the subject of litigation.

Solid Waste Diversion

Solid waste diversion is the process of diverting waste from landfills through reuse, recycling, and composting. The State of California requires that all jurisdictions meet a 50 percent waste reduction mandate as established by the Integrated Waste Management Act of 1989. As shown in Table 5-3, the West County WMA had a residential per capita disposal rate of 3.6 pounds per day (PPD) and an employment per capita disposal rate of 14.4 PPD in 2009, which met the maximum targets set for that year (5.4 and 22.1 mgd respectively).

TABLE 5–3 WEST CONTRA COSTA INTEGRATED WASTE MANAGEMENT AUTHORITY DIVERSION RATES

	POPULATION DISPOSAL (PPD)[1]		EMPLOYMENT DISPOSAL (PPD)	
YEAR	TARGET	ANNUAL	TARGET	ANNUAL
2007	5.4	4.8	22.1	18.5
2008	5.4	4.4	22.1	16.9
2009	5.4	3.6	22.1	14.4

Note: In 2007, California Department of Resources Recycling and Recovery (CalRecycle) introduced a new system of measuring diversion rates, using a per capita disposal threshold equivalent to the 50 percent diversion requirement. The new threshold is one of several "factors" in determining a jurisdiction's compliance with State law, and allows CalRecycle and local jurisdictions to set their primary focus on successful implementation of diversion programs.

1 PPD = Pound per person per day.

Source: California Department of Resources Recycling and Recovery, 2010.

GUIDING POLICY

5-G-1 Continue the successful provision, maintenance and operation of infrastructure and public utilities to maintain the quality of life and sustainability of the San Pablo Avenue corridor.

IMPLEMENTING POLICIES

5-I-1 Maintain successful cooperation with independent agencies to continue adequate utility service throughout the San Pablo Avenue Specific Plan Planning Area.

5-I-2 Promote efficient use and conservation of water in the design of new residential and commercial development. This includes the installation of water meters and low-flow showerheads, faucets and toilets.

5-I-3 Promote efficient use of and conservation of water in the design of new streetscape and landscaped areas. This includes the installation of drought-resistant plant palettes.

Use the California Model Water Efficient Landscape Ordinance (Division 2, Title 23, California Code of Regulations Chapter 2.7, Sections 490-495) during project review to ensure irrigation plans achieve all feasible water savings.

5-I-4 Promote efficient use of and conservation of water in the design of new streetscape and landscaped areas. This includes the installation of drought-resistant plant palettes.

5-I-5 Design creek-side open space improvements to prevent flooding within the public right-of-way and near open space amenities.

5-I-6 Require all new private development located along above-ground creeks to prevent flooding with ample setbacks.

5-I-7 Expand the wastewater collection system such that it is adequate to serve the projected development along the San Pablo Avenue corridor. Coordinate with the West County Wastewater District to update the collection system and Wastewater Master Plan to ensure that adequate conveyance capacity is available.

5-I-8 Require all new development to participate in all recycling and hazardous waste reduction and solid waste diversion programs in effect at the time of issuance of building permits.

5.2 PUBLIC SERVICES

Public services in the Planning Area, including police and fire protection, contribute to creating a safe, livable environment within the San Pablo Avenue corridor. The proposed increase in population and development intensity in the Planning Area will likely increase the demand for these services. This section provides policies for ensuring that these services remain available and continue to benefit existing and new development in the Planning Area.

Police Services

Police services within the Planning Area are provided by the City of San Pablo Police Department. The Police Department operates out of one 15,000-square-foot police facility located in the Planning Area at 13880 San Pablo Avenue. The Department is a full-service community-based law enforcement agency, with three divisions (Patrol, Investigations, and Support Services) managed by the Chief of Police. The Department has five patrol teams, 53 sworn officers, 22 support staff, and more than seventy specialized assignments and/or programs.

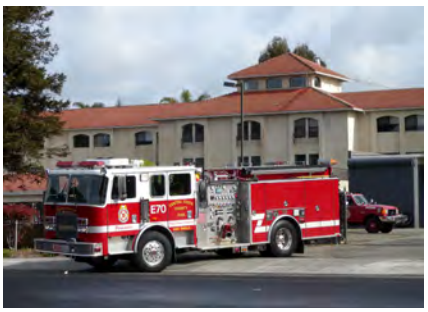
The Police Station is located in the heart of the Planning Area.

The current level of service is 1.6 officers to 1,000 residents, which is lower than the national average of 2.5 officers per 1,000[4] residents. No new stations will be required to service the additional residents projected by the Specific Plan. To maintain the existing ratio of officers to residents, five or six additional officers will be required.

The Department does not have a response time mandate, but according to records, 90 percent of priority-one calls are handled within 11 minutes, priority-two calls within 16 minutes, and priority-three calls within 16 minutes. Calls held over 30 minutes must be approved by the watch commander. With the growth projected by the Specific Plan, the Department foresees an increase in calls for service, traffic, crime prevention, youth services, and other related police activity.

Fire Protection Services

Fire Safety Services in the Planning Area are provided by the Contra Costa County Fire Protection District. The District currently operates one fire station (Station #70) within the Planning Area located at 13928 San Pablo Avenue.



Fire services in the Planning Area are partly met by Fire Station #70 off San Pablo Avenue.

The San Pablo Fire Station is actively manned 24 hours a day, 7 days a week, with two engine companies. Fire dispatch is handled through the Contra Costa County Regional Communications Center. The Fire Protection District provides fire-fighting services, lift and elevator rescue services, and medical

4 U.S. 2003 Bureau of Justice Law Enforcement and Management Administrative Statistics.

response. Additionally, the District enforces fire-safety regulations by notifying property owners to cut vegetation that constitutes a fire hazard.

The Fire Protection District establishes no staffing or service ratios for the San Pablo Fire Station, but in general, it aims to provide one fire station for a population of 26,000. Currently, the District has an Insurance Service Office (ISO) rating of 3, on a scale of 1 to 10 with 1 being the highest. District policy establishes a six-minute response goal from dispatch to arrival for fire service in the region.

The District has a mutual aid agreement with the Richmond Fire Department to ensure quick and adequate response to any fire emergency. Three Richmond stations, numbers 62, 66, and 68, are located within a mile of the Planning Area boundary.

GUIDING POLICY

5-G-2 Maintain a safe and livable environment in the Planning Area by ensuring that building design and site planning adequately address public safety considerations.

IMPLEMENTING POLICIES

5-I-9 Coordinate with the San Pablo Police Department on project site design to increase public safety.

Refer to Chapter 4: Wayfinding and Visibility policies for additional guidance on lighting and design for safety.

5-I-10 Work with the Contra Costa County Fire Protection District to ensure that new development projects in the Planning Area have adequate emergency access.

5-I-11 Ensure that fire flow capacity is adequate for new development and that necessary improvements, such as fire access roadways and fire hydrants, are installed and in service prior to building construction.